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Proposed Maximum Residue Limit PMRL2016-26

Cyantraniliprole

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Under the authority of the *Pest Control Products Act*, Health Canada's Pest Management Regulatory Agency (PMRA) has concluded that the addition of new uses on Crop Subgroup 1B, Crop Group 2, Crop Group 6 (including soybeans), Crop Subgroup 13-07H, and peanuts to the product label of Dupont Exirel Insecticide; and Crop Subgroup 1B to the product label of Dupont Verimark Insecticide; containing technical grade cyantraniliprole, is acceptable. The specific uses approved in Canada are detailed on the label of Dupont Exirel Insecticide and Dupont Verimark Insecticide, *Pest Control Products Act* Registration Numbers 30895 and 30892, respectively.

The evaluation of these cyantraniliprole applications indicated that the end-use products have value and the human health and environmental risks associated with the new uses are acceptable.

Before registering a pesticide for food use in Canada, the PMRA must determine the quantity of residues that are likely to remain in or on the food when the pesticide is used according to label directions and that such residues will not be a concern to human health. This quantity is then legally established as a maximum residue limit (MRL). An MRL applies to the identified raw agricultural food commodity as well as to any processed food product that contains it, except where separate MRLs are specified for the raw agricultural commodity and a processed product made from it.

In addition, the PMRA is proposing to establish MRLs for cyantraniliprole on coffee, tea, rice, and pomegranates to permit the import and sale of food containing such residues. The PMRA has determined the quantity of residues that are likely to remain in or on the imported commodities when cyantraniliprole is used according to label directions in the exporting country, and that such residues will not be a concern to human health.

Consultation on the proposed MRLs for cyantraniliprole is being conducted via this document (see Next Steps, the last section of this document). A summary of the field trial data used to support the proposed MRLs can be found in Appendix I.

To comply with Canada's international trade obligations, consultation on the proposed MRLs is also being conducted internationally by notifying the World Trade Organization, as coordinated by the Canada's Notification Authority and Enquiry Point.

The proposed MRLs, to replace or be added to the MRLs already established for cyantraniliprole, are as follows.

Table 1 Proposed Maximum Residue Limits for Cyantraniliprole

Common Name	Residue Definition	MRL (ppm)[1]	Food Commodity
Cyantraniliprole	3-bromo-1-(3-chloro-2-pyridinyl)-*N*-[4-cyano-2-methyl-6-[(methylamino)carbonyl]phenyl]-1*H*-pyrazole-5-carboxamide	60	Tea (dried leaves)
		40	Leaves of root and tuber vegetables (Crop Group 2)
		2.0	Edible-podded legume vegetables (Crop Subgroup 6A)
		1.0	Dried shelled peas and beans (Crop Subgroup 6C)
		0.4	Root vegetables except sugar beets (Crop Subgroup 1B)[2], dry soybeans, meat byproducts of cattle, goats, horses, and sheep[3]
		0.2	Succulent shelled peas and beans (Crop Subgroup 6B), milk[3]
		0.1	Fat and meat of cattle, goats, horses, and sheep[3]
		0.08	Low growing berries except strawberries (Crop Subgroup 13-07H)
		0.05	Green coffee beans
		0.015	Rice
		0.01	Peanuts, pomegranates

[1] ppm = parts per million
[2]The MRL is proposed to replace the currently established 0.02 ppm MRL for crop subgroup 1A, except sugar beet
[3]The MRL is proposed to replace the currently established 0.01 ppm MRL for milk, fat, meat and meat byproducts of cattle, goats, horses, and sheep

MRLs are proposed for each commodity included in the listed crop groupings in accordance with the Residue Chemistry Crop Groups webpage in the Pesticides and Pest Management section of Health Canada's website.

MRLs established in Canada may be found using the Maximum Residue Limit Database on the Maximum Residue Limits for Pesticides webpage. The database allows users to search for established MRLs, regulated under the *Pest Control Products Act*, both for pesticides or for food commodities.

International Situation and Trade Implications

MRLs may vary from one country to another for a number of reasons, including differences in pesticide use patterns and the locations of the crop field trials used to generate residue chemistry data. For livestock commodities, differences in MRLs can also be due to different livestock feed items and practices.

Table 2 compares the MRLs proposed for cyantraniliprole in Canada with corresponding American tolerances and Codex MRLs.[1] American tolerances are listed in the Electronic Code of Federal Regulations, 40 CFR Part 180, by pesticide. A listing of established Codex MRLs is available on the Codex Alimentarius Pesticide Residues in Food website, by pesticide or commodity.

Table 2 Comparison of Canadian MRLs, American Tolerances and Codex MRLs

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Tea (dried leaves)	60	Not Established	Not Established
Leaves of root and tuber vegetables (CG2)	40	Not Established	Not Established
Edible-podded legume vegetables (CSG6A)	2.0	Not Established	Not Established
Dried shelled peas and beans (CSG6C)	1.0	Not Established	Not Established
Root vegetables, except sugar beets (CSG1B)	0.4	Not Established	Not Established
Dry soybeans	0.4	Not Established	Not Established
Meat byproducts of cattle, goats, horses, and sheep	0.4	0.01	0.01
Succulent shelled peas and beans (CSG6B)	0.2	Not Established	Not Established
Milk	0.2	0.01	0.01
Fat and meat of cattle, goats, horses, and sheep	0.1	0.01	0.01
Low growing berries, except strawberries (CSG13-07H)	0.08	Not Established	Not Established

[1] The Codex Alimentarius Commission is an international organization under the auspices of the United Nations that develops international food standards, including MRLs.

Food Commodity	Canadian MRL (ppm)	American Tolerance (ppm)	Codex MRL (ppm)
Green coffee beans	0.05	Not Established	0.03[1]
Rice	0.015	Not Established	Not Established
Peanuts	0.01	Not Established	Not Established
Pomegranates	0.01	Not Established	Not Established

[1] The MRL is based on a PHI of 28 days, whereas the proposed MRL is based on a PHI of 7 days.

Next Steps

The PMRA invites the public to submit written comments on the proposed MRLs for cyantraniliprole up to 75 days from the date of publication of this document. Please forward your comments to Publications (see the contact information on the cover page of this document). The PMRA will consider all comments received before making a final decision on the proposed MRLs. Comments received will be addressed in a separate document linked to this PMRL. The established MRLs will be legally in effect as of the date that they are entered into the MRL Database.

Appendix I

Summary of Field Trial Data Used to Support the Proposed Maximum Residue Limits

Residue data for cyantraniliprole were submitted to support the domestic use of Dupont Exirel Insecticide on Crop Subgroup 1B, Crop Group 2, Crop Group 6 (including soybeans), Crop Subgroup 13-07H, and peanuts; and Dupont Verimark Insecticide on Crop Subgroup 1B. Residue data for cyantraniliprole in coffee, tea, pomegranates, and rice were submitted to support the maximum residue limits on these imported crops.

Maximum Residue Limits

The recommendation for maximum residue limits (MRLs) for cyantraniliprole was based upon the submitted field trial data, and the guidance provided in the OECD MRL Calculator. Table A1 summarizes the residue data used to calculate the proposed MRLs for Crop Subgroup 1B, Crop Group 2, Crop Group 6 (including soybeans), Crop Subgroup 13-07H, peanuts, coffee, tea, pomegranates, and rice.

Table A1 Summary of Field Trial and Processing Data Used to Support MRLs

Commodity	Application Method/ Total Application Rate (g ai/ha)[1]	Preharvest Interval (days)	Lowest Avergare Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Tea (dried leaves)	200	7	4.2	20.5	None
Leaves of root and tuber vegetables (CG2)	440-460	1	2.1	23.0	None
Edible-podded legume vegetables (CSG6A)	444-458	1	0.28	0.78	None
Dried shelled peas and beans (CSG6C)	446-457	6-7	0.01	0.51	None
Root vegetables, except sugar beets (CSG1B)	448-454	1	<0.01	0.20	None
Dry soybeans	446-462	5-8	<0.01	0.24	None

Commodity	Application Method/ Total Application Rate (g ai/ha)[1]	Preharvest Interval (days)	Lowest Avergare Field Trial Residues (ppm)	Highest Average Field Trial Residues (ppm)	Experimental Processing Factor
Succulent shelled peas and beans (CSG6B)	451-460	1	0.01	0.10	None
Low growing berries, except strawberries (CSG13-07H)	457	12-15	<0.01	0.04	None
Green coffee beans	400 of 200 g/L SC + 350 of 100 g/L OD	7	<0.01	0.03	None
Rice	200	7	0.08	3.3	None
Peanuts	438-499	13-15	0.2	2.1	None
Pomegranates	180	5	<0.005	<0.005	None

[1] g ai/ha = grams of active ingredient per hectare

Based on the dietary burden and residue data, MRLs of 0.1 ppm in fat and meat of cattle, goats, horses, and sheep, 0.2 ppm in milk, and 0.4 ppm in meat byproducts of cattle, goats, horses, and sheep to cover residues of cyantraniliprole are also proposed to replace the current MRL of 0.01 ppm.

Following the review of all available data, MRLs as proposed in Table 1 are recommended to cover residues of cyantraniliprole. Residues of cyantraniliprole in these crop/livestock commodities at the proposed MRLs will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.